

National Aeronautics and Space Administration



Roundup

Lyndon B. Johnson Space Center

November | 2009



All hands on deck



On the cover:

It takes the entire NASA family, on the ground and in space, to flexibly adapt to new situations as they arise on shuttle or station. Read more about how some recent contingencies were handled on pages 6 and 7.



PHOTO/U2

Photo of the month:

U2's Bono (left) and Edge occupy the seats normally reserved for Spacecraft Communicators (CAPCOMs) during a brief visit to the Johnson Space Center and a stop by the Mission Control Center. They were able to talk to some of the current crew members aboard the International Space Station.

As we observe Veterans Day this month, I would like to take this opportunity to express my personal gratitude to all those in our Johnson Space Center family, as well as their family members, who have served or are currently serving in the military. I consider myself fortunate to have proudly served for many years in two wonderful organizations: NASA and the U.S. Navy. Although NASA is, of course, a civilian space agency, there are several similarities with the military services:

- We take great pride in our work and are proud to tell people what we do
- We love our country and value service to our country
- We want to make a difference
- We work with a talented team of highly motivated people
- We take care of each other



NASA PHOTO

Every year we bring a group of “Wounded Warriors” from the Brooke Army Medical Center in San Antonio, Texas, to JSC for a tour and lunch with our astronauts. I wish everyone could have the opportunity to meet these amazing young men and women. Despite severe wounds, they invariably have an incredibly positive attitude that inspires and helps me put our daily challenges at JSC in proper perspective. They are my heroes and the finest this nation has to offer. You would be as proud of them as I am.

At last month’s NASA Executive Summit, our Administrator Charlie Bolden (MGEN, USMC, Ret.) compared his years in the U.S. Marine Corps and his years at NASA by saying, “Both organizations are small, with insufficient funds. Both are asked to do everything for everybody, and they do it.”

As you enjoy the Veterans Day holiday, please remember those who have served and are serving our country.

Mike

In this edition ...

- 3** JSC Director Mike Coats and fellow volunteers brought the wonder of space to kids at Texas Children’s Hospital
- 4** NASA and the military have a few things in common
- 5** We recently kicked up some moon dust to find traces of water ice
- 6** Even if it wasn’t a part of the plan, Mission Operations is quick to adapt
- 8** Space Life Sciences is boldly going where they haven’t before
- 9** Hometown Heroes touches lives across the country
- 10** Meet Configuration Management Analyst Leslie Brown
- 11** Get your fill of center happenings and see what Buzz Lightyear has been up to since his return from space
- 12** Coats and senior staff toured some impressive spacesuit laboratories

JSC volunteers 'ARTreach'

Texas Children's Cancer Center at Texas Children's Hospital

By Laura Rochon

For children undergoing cancer or blood disorder treatments, a waiting room can test patience and heighten fears. But the Arts in Medicine Program at Texas Children's Cancer Center at Texas Children's Hospital aims to transform the outlook and attitudes of kids during this stressful time by inspiring and guiding them to creatively express themselves. Volunteers to the program provide a positive experience by leading young patients into art projects or by simply being a comforting presence.

As part of Johnson Space Center's community outreach, JSC Director Mike Coats and fellow team members visited the children and their families on Sept. 25. Coats hugged some of the young patients, gave out mission patches and shuttle pins and read the story, "I Want to Be an Astronaut," to a

It's been theorized that creativity and inspiration through the arts affect the mind and body, helping to reduce stress and possibly aid in the healing process. Allowing children to express pent-up emotions may even help them cope with their condition.

"Art programs and visits like the one from the volunteers at JSC encourage our patients and their siblings to get involved in creative outlets that not only pass time but spark learning," said Carol Herron, Arts in Medicine Program coordinator. "You can tell by the looks on the faces of the parents that they appreciate the opportunity to see their children actively involved in something fun and educational."



ALLEN KRAMER, TEXAS CHILDREN'S HOSPITAL



ALLEN KRAMER, TEXAS CHILDREN'S HOSPITAL

"When a child opens their arms to give you a hug—that's an important moment," JSC Director Mike Coats said.

wide-eyed group of youngsters.

"I wanted to find a way that the JSC family could help children who are fighting cancer," Coats said. "Space exploration is inspirational to every age, and I wanted these kids to know that they are the ones who may see us go to Mars. I hope that dream will help them get well."

Other JSC volunteers helped kids color in space-themed books and decorate colorful astronaut cardboard dolls using an assortment of crafts. Passports were tethered to their astronaut's spacesuit with the idea of bringing their newly created pal alongside them for moral support during medical treatments.

"While children made their astronauts, volunteers shared information on space exploration," said Cindy McArthur, lead of JSC's Teacher From Space Program, who developed the activity. "A perfect combination—learning while having fun."



In conjunction with the Arts in Medicine Program, The Periwinkle Foundation recently presented "Making a Mark," an exhibition of art and creative writing by children touched by cancer and blood disorders. Many of them wrote about their feelings, the beauty of nature and themes of space and eternity.

This World

I dance with the stars because it makes me happy
When the volcano shouts. I listen
When the river sighs, I sit down in the sand
The world is beautiful. Beautiful
--Takhirah, 7

Morning and Night

The stars spin at night and kiss the planets
While plants get ready for bed
The flowers open in the morning and
Dogs bark at the grass
I believe in peace as the stars ravel through the sky
And come back again at night
--Ebony, 11



ALLEN KRAMER, TEXAS CHILDREN'S HOSPITAL

Educational Specialist Jonathan Neubauer demos a spacesuit, giving children a sense of spacewalking technology in microgravity.

What the military means to me

By Elizabeth George

As the world evolves, both NASA and the U.S. military face new challenges and opportunities. On Nov. 11, we celebrate Veterans Day to honor America's veterans for their patriotism, love of country and willingness to serve and sacrifice for the common good. While the influence and work of the military can be found throughout the world, their impact at home serves as an inspiration to all Americans. As we honor our service members and veterans, members of the NASA family reflect on what the military has meant to their lives.

“Enlisting in the U.S. Air Force was a great opportunity for me to serve my country while gaining the experience that got me here today. As a ground systems operator for the Global Positioning System, I worked with networks and systems that directly relate to what I do here at Johnson Space Center. I'm proud of the time I served and appreciate all of those who are currently fighting for our freedom.”

- Charles R. Wilson (standing), International Space Station ground controller, Honeywell Technology Solutions, Inc.



NASA/STAFFORD JSC2008E121168

“Today's Army is so different than the Army of my father during the Korean era. But no matter the difference, the Army of men and women that choose to serve this country, along with all service members, deserve all the respect and dignity we can give and so much more. The U.S. Army gives us freedom. Freedom brings opportunity. Opportunity makes our country great. I thank them for not only serving our country, but all mankind.”

- Trudy Duhon, Mission Control Center Space Shuttle Program delivery manager, USA

“Being a sailor allows you to defend the Constitution of the United States while being an ambassador throughout the world. I enjoyed the teamwork, the camaraderie and being a part of the leadership continuum, learning from those who served before me and passing those lessons along to those who followed. None of it, however, would be possible without the support of my family throughout the years. Our proudest moment was watching our son 'Pass in Review' at Navy recruit graduation three years ago.”

- Robert Martel, Health Systems specialist



NASA/PHOTO S115E05848

“What does being a Marine mean to me? Simple. Just google 'A message to Garcia' and read the essay by Elbert Hubbard. The ability to accomplish projects and goals in a 'fuzzy,' realistic world without many 'knowns' or 'givens.' The ability to make a decision and act, no matter what level in the organization. That's enough.”

- Matt Soltis, lead, JSC Office of Emergency Management

“The Coast Guard is our smallest military service, but what it lacks in size it makes up for in resourcefulness and dedication, qualities it shares with NASA. Since its founding in 1790, the Coast Guard has fought in conflicts around the world. During the battle for Guadalcanal, Coast Guard Coxswain Douglas Munro led a flotilla of landing craft, evacuating a battalion of Marines pinned down by enemy fire. Demonstrating ingenuity and courage, Munro intentionally piloted his landing craft into the line of fire and shielded the Marines, costing him his life but enabling the safe evacuation of hundreds of men.”

- Capt. Dan Burbank, USCG, Ret., NASA astronaut

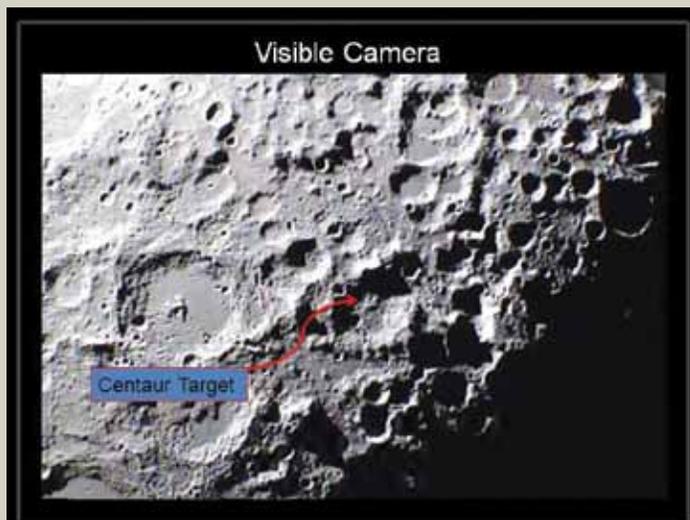


NASA makes an impact with LCROSS

NASA's Lunar Crater Observation and Sensing Satellite (LCROSS) created twin impacts on the moon's surface very early in the morning on Oct. 9 in a search for water ice. Scientists will analyze data from the spacecraft's instruments to assess whether water ice is present.

The satellite traveled 5.6 million miles during a historic 113-day mission that ended in the Cabeus crater, a permanently shadowed region near the moon's south pole. The spacecraft was launched June 18 as a companion mission to the Lunar Reconnaissance Orbiter from Kennedy Space Center in Florida.

"The LCROSS science instruments worked exceedingly well and returned a wealth of data that will greatly improve our understanding of our closest celestial neighbor," said Anthony Colaprete, LCROSS



LCROSS impact crater as seen with the visible light camera.

principal investigator and project scientist at Ames Research Center. "The team is excited to dive into data."

In preparation for impact, LCROSS and its Centaur upper stage rocket separated about 54,000 miles above the surface of the moon on Oct 8. Moving at a speed of more than 1.5 miles per second, the Centaur hit the lunar surface shortly after 6:31 a.m. CDT Oct. 9, creating an impact that instruments on LCROSS observed for approximately four minutes. LCROSS then collided with the surface at approximately 6:36 a.m. CDT.

"This is a great day for science and exploration," said Doug Cooke, associate administrator for the Exploration Systems Mission Directorate at NASA Headquarters in Washington. "The LCROSS data should prove to be an impressive addition to the tremendous leaps in knowledge about the moon that have been achieved in recent weeks."

The data will be shared with the LCROSS science team for analysis. The LCROSS team expects it to take several weeks of analysis before it can make a definitive assessment of the presence or absence of



NASA/DAN ANDREWS

Two proud "fathers," Dan Andrews, LCROSS project manager (left), and Craig Tooley, Lunar Reconnaissance Orbiter (LRO) project manager, stand proudly in front of their "babies:" LRO (top) and LCROSS (bottom).

water ice.

The images and video collected by the amateur astronomer community and the public also will be used to enhance our knowledge about the moon. "One of the early goals of the mission was to get as many people to look at the LCROSS impacts in as many ways possible, and we succeeded," said Jennifer Heldmann, Ames' coordinator of the LCROSS observation campaign. "The amount of corroborated information that can be pulled out of this one event is fascinating."

"It has been an incredible journey since LCROSS was selected in April 2006," said Andrews. "The LCROSS Project faced a very ambitious schedule and an uncommonly small budget

for a mission of this size. LCROSS could be a model for how small robotic missions are executed. This is truly big science on a small budget."

For more information about the LCROSS mission, including images and video, visit:

<http://www.nasa.gov/lcross>



NASA/PHOTO

LCROSS project scientists Anthony Colaprete and Dr. Kim Ennico review early results from the Centaur and spacecraft impacts.

Mission Operations Directorate

Not your average day planner

In May, the International Space Station reached full occupancy with its first six-person crew. It's an amazing accomplishment for the program and opens the door for opportunities to do more science and research. But for the team that plans the astronauts' daily schedules, this many people can lead to quite the juggling act.

"The biggest impact going to six crew operations is the complication of the schedules," said Joseph Kitchen, Operations Planning lead for Expeditions 19 and 20. "It's not twice as complicated as a three-crew

plan; it's probably 10 times more complicated."

Kitchen's team develops plans up to two weeks in advance, but when contingencies occur onboard, they have to rework the schedules to fix the problem. During Expedition 20, there was a significant amount of in-flight maintenance (IFM), including the Oxygen Generation Assembly failure and issues with the treadmill.

"Working to fix these issues takes a significant amount of crew time," Kitchen said. "No matter how many crew you have, any time you have to react and re-plan, it can be difficult."

When asked about the number one issue with developing crew schedules, Kitchen summed it up with one word. "Exercise," he said.

Every crew member requires two-and-a-half hours of exercise every day in addition to their six-and-a-half hour workday. Each U.S. crew

member gets three Treadmill with Vibration Isolation and Stabilization exercise sessions per week. The equipment supplements the Russians' exercise regimen as well.

"On (STS-127/2)JA there were many exercise constraints due to mission requirements," said Operations Planner Samantha Davis. "The solution was to put exercise in the pre- and post-sleep periods on the schedule."

Normally, exercise would be interspersed throughout the day.

"The good thing about having six people is that there's more time and more crew members available to do IFM work and payload operations," Davis said.

Along with that comes more international partner (IP) coordination. The planners integrate the plans of all the IPs to make sure there aren't any conflicts. With several different IPs involved and more crew, there's a lot more content to each plan. With the increase in content, there's

additional opportunity for conflict. While this can make for a hectic workday, the planners remain cool under pressure.

"We were proactive and we knew that we needed to step up for this challenge," Kitchen said. "It was probably a bigger impact than we originally thought, but we had the people in place and trained to handle it."



NASA/PHOTO ISS020E011065

Expedition 20 Flight Engineer Frank De Winne exercises on the Treadmill Vibration Isolation System in the Zvezda Service Module of station. Cosmonaut Roman Romanenko is at left.



NASA/PHOTO ISS020E008891

The six-person Expedition 20 crew. From the left (front row) are Canadian Space Agency astronaut Robert Thirsk, Japan Aerospace Exploration Agency astronaut Koichi Wakata, both flight engineers; and cosmonaut Gennady Padalka, commander. From the left (back row) are NASA astronaut Michael Barratt, cosmonaut Roman Romanenko and European Space Agency astronaut Frank De Winne, all flight engineers.

Heated moments in space

When STS-127/2JA docked to the International Space Station, 13 astronauts converged as the largest number of crew members ever to be on station at one time. With this many people onboard, it wasn't the time for critical hardware to fail ... but the Carbon Dioxide Removal Assembly (CDRA) had other plans.

"We have to have the CDRA running full-time to keep carbon dioxide (CO2) levels in the atmosphere manageable from a crew health perspective," said Whitney Maples, Environmental Control Life Support Systems (ECLSS) Flight Control Group lead. "That's true all the time, but it's especially true when you have that many people onboard."



NASA/PHOTO JSC2009E147211

ECLSS controller Meghan Erne was on console when this failure occurred. She was responsible for noticing the heater failure and safing the system.

Thriving Under Pressure

By Sean Elizabeth Wilson

On Flight Day 11 of *Endeavour's* mission, one of the CDRA heaters unexpectedly stayed on when it was scheduled to be turned off by internal software, an error that could result in system failure. Within a matter of hours, the CO2 in the atmosphere would have reached dangerous levels for the crew. The cause was unknown, and discussions began immediately to undock the shuttle early, if needed, which would have resulted in a loss of four docked mission days and a spacewalk.

With a similar Russian system carrying the entire load temporarily, the ECLSS team began working feverishly to get CDRA functionality back. Their first step was to bypass the software and mask the failed heater. With the software off, the controllers had to command the unit manually. They developed a procedure to send the roughly 100 commands needed every two-and-a-half hours that the software was supposed to do automatically.

"From the time we saw the failure to the time we finally had the CDRA back on was only eight hours," Maples said.

Because the team was so quick to react, the CO2 levels in the atmosphere never got even close to the limits defined in the flight rules. To the team's credit, they were able to identify the problem and fix it without affecting the crew members on station.

"It was totally seamless from the crew's point of view," Maples said. "That's what we want as the flight control team. We want to be able to take care of things in the background (so) no one even knows there (is) a problem."

A crucial fix

The most critical resource needed to sustain a crew on the International Space Station is oxygen. That's why signs of malfunction in the station's Oxygen Generating Assembly (OGA) generated immediate interest and the formation of a team to find a solution.

Prior to the STS-127/2JA mission and just a few months after expanding the station's crew to six, the OGA was exhibiting signs of a blockage. Soon, the OGA began to reach built-in limits that would force the system to shut itself down.

"Without the OGA we can't support a six-person crew," said Ivy Apostolakopoulos, station Mechanisms and Maintenance Operations and Support Officer (OSO).

The Environmental Control Life Support System (ECLSS) and OSO teams were tasked to find out what needed to be done to fix the problem



NASA/PHOTO ISS2008E148065

ECLSS controller John Garr supported the development of a software patch to further work around the failure. The time between the initial failure and a restored system was less than two days.

as quickly as possible.

Their first suspicion was of a clogged filter somewhere in the intricate system's pump and plumbing. The OSO team took the action to break open the pump on-orbit replacement unit (ORU) and look at the filter. "It was never designed to be broken into on orbit," Apostolakopoulos said. "You've got all sorts of hazards involved with this hardware, so it was a tricky procedure to develop."

When the crew executed the procedure, it didn't fix the problem. So, right before launch of STS-127/2JA, the teams decided to completely swap out the water ORU.

"None of us thought this was going to fix the problem, but it did," Apostolakopoulos said. "It was a last-ditch effort, because if we couldn't (recover) the OGA, we would have had to think about bringing three crew members home, because there just wouldn't be enough oxygen for all of them."

Work continued into the busy STS-128/17A docked timeframe. The crew broke open the failed water ORU and replaced its filter so that it could stay on orbit as a viable spare. Both the water and pump ORU filters were returned to Earth on STS-128/17A for further analysis. Based on ground inspections of the returned water ORU filter, chances are good that the filter was the cause of the failure. That means the repaired water ORU is once again a viable spare available for use by station crews.

Thanks to the intensive work from the OSO and ECLSS teams, the mission continued without interruption. Their drive to get the procedures written and the choreography mapped out made these technically challenging tasks seamless for the crew and the operations team on console.



NASA/PHOTO ISS020E038389

View taken by the Expedition 20 crew during a successful remove-and-replace on the Oxygen Generator Assembly Water Orbital Replacement Unit's inlet screen.

Space Life Sciences

By Neesha Hosein

Exploring space, enhancing life

The Space Life Sciences Directorate (SLSD) adopted a number of new approaches to support its mission of optimizing human health and productivity for space exploration, focusing on collaboration and enhanced communication.

"Our strategy is to develop new business models to drive innovation," said Dr. Jeffrey Davis, director, SLSD. "We are collaborating with academia and industry to infuse novel technologies and approaches into our portfolio."

SLSD tagline contest

SLSD launched a first-of-its-kind tagline contest, proposed and organized by the SLSD Strategic Communications Team in June. More than 150 submissions were collected, from which four finalists were chosen.

Directorate members voted on their favorite, submitted by Rachel Brady, Wyle biomedical engineer. Brady's victorious tagline, "Exploring Space, Enhancing Life," will be commonly seen in SLSD communications.

Open Innovation

A second initiative is a pilot project using Open Innovation Service Providers, which match an organization's needs (challenges) with a network of problem solvers to provide efficient, cost-effective solutions through innovation malls.

The two winning companies, InnoCentive and Yet2.com, were selected on the basis of network size and span of knowledge area, established processes, experience base and cost. The project will run through February 2010 and includes training, refinement of test challenges, network search, evaluation, award and lessons learned.

SLSD Innovation Lecture Series

The SLSD Innovation Lecture Series is a forum for experts in industry, academia and government to share experiences with new models for driving innovation. Speakers cover a diverse range of topics, providing information and encouraging new ways of doing business at NASA.

The lectures are approximately an hour, and participants leave with an increased knowledge base and resource materials in areas such as accelerated research, open innovation and commercial space. They are delivered four to six times per year at JSC and are offered remotely through WebEx.

Barcamp

A "barcamp" is an informal gathering based on people's desire to share and learn in an open environment. The first SLSD Barcamp was held in August as a tool to increase enthusiasm and communication and create a platform for SLSD members to share their work. Barcamp also aids in bridging gaps, facilitating knowledge across divisions, brainstorming new ideas and developing existing ones.

Although it was a new idea to SLSD and the JSC community, the event brought more than 80 participants. Topics ranged from knowledge management to sustainable workplaces. The next centerwide SLSD Barcamp is tentatively scheduled for January.

The Future of SLSD

These are just a few of the new initiatives SLSD has established to date. The directorate will continue to find new ways to drive innovation and create sustained enthusiasm and support for space exploration. SLSD's inspiration comes from industry, academia and government agencies local and worldwide.



Jeffrey R. Davis, MD, director, Space Life Sciences, speaks on the future of innovation.

NASA/PHOTO

The **2009** Hometown Heroes campaign keeps its eye on the ball: the American public

By Sean **Elizabeth** Wilson

Johnson Space Center outreach hit six home runs this season with the 2009 Hometown Heroes campaign. Building on the success of the 2008 campaign, six astronauts went back to their home regions to appear at Major League Baseball games to educate, engage and excite the public about the importance of the International Space Station and the future of space exploration.

While the trips centered on ceremonies at the ball clubs, the astronauts' schedules were packed with media interviews and other opportunities to reach a wide array of audiences. Venues included public libraries, science museums, mayors' offices, schools and other community outlets, allowing people the unique opportunity to personally interact with an astronaut.

"I had a chance to speak to kids, college students, the general public and athletes, which is a very broad spectrum of folks," astronaut Shane Kimbrough said of his two-day visit to Atlanta.

In addition to appearing at an Atlanta Braves game, Kimbrough gave presentations to a group of Women in Engineering campers at his alma mater Georgia Tech and a group of students at the Fernbank Science Center.

"I think we did a lot of good for NASA overall," Kimbrough said.

Astronaut Tracy Caldwell started her trip with a visit to the San Diego mayor's office and went on to throw out the first pitch at a San Diego Padres game. Caldwell emphasized the impact of reaching out to baseball fans.

"There's no greater mob to invite NASA into than a stadium filled with devoted fans of a favorite American pastime," Caldwell said. "Throw in the town astronaut and the crowd instantly connects."

Astronauts Mike Massimino and John Grunsfeld visited their hometowns of New York City and Chicago, two of the largest media markets in the United States. Their nine interviews on radio, television and in print reached almost 8 million people combined.

The final stop of the campaign was in St. Louis, Sandy Magnus' hometown. Magnus spoke to hundreds of students at the St. Louis Science Center planetarium, where she inspired them as well as some of their parents. Charli Wheeler and her 6-year-old daughter, Laci Jo, came from Mobley, Mo., to hear Magnus speak.

"Laci Jo has always been interested in space," the elder Wheeler said. "But this is a female (astronaut). It shows her what women can do. We live in a small town where there are still stereotypes that woman can't do everything."

Moments like this are why this campaign exists. NASA reaches out to inspire those who otherwise might never have the opportunity to interact with an astronaut.

Hometown Heroes Recap

- Visited **six** cities with Major League Baseball teams
- Personally reached almost **200,000** visitors during **19** appearances
- **30** media interviews seen or heard by more than **10 million** people



NASA/PHOTO JSC2009E147295

John Grunsfeld at Chicago

Six media interviews
Adler Planetarium
Museum of Science and Industry
Chicago White Sox



NASA/PHOTO JSC2009E151929

Shane Kimbrough at Atlanta

Six media interviews
Fernbank Science Center
Georgia Tech
Atlanta Braves



NASA/PHOTO JSC2009E152837

Greg H. Johnson at Cincinnati

Four media interviews
Cincinnati Museum Center
Cincinnati Reds



NASA/PHOTO JSC2009E172816

Tracey Caldwell at San Diego

Five media interviews
San Diego Mayor Jerry Sanders
San Diego Air and Space Museum
San Diego Padres



NASA/PHOTO

Mike Massimino at New York City

Three media interviews
Intrepid, Sea, Air and Space Museum
New York City Fire Museum
New York Public Library
New York Hall of Science
New York Mets



NASA/PHOTO JSC2002E22539

Sandra Magnus at St. Louis

Six media interviews
Boy Scout Troop Gathering
St. Louis Science Center
St. Louis Cardinals

Spotlight Leslie Brown

Configuration Management Analyst, Software, Robotics, and Simulation Division and Systems Architecture and Integration Office

Q: Coolest part of your job?

A: Hearing about all of the technical and medical training operations for the astronauts.

Q: Favorite hobbies or interesting things you do away from the office?

A: Traveling and karaoke.

Q: What would you be doing if you weren't in your current job at Johnson Space Center?

A: Property management.

Q: What did you want to grow up to be when you were a child?

A: A nurse.

Q: What would people be surprised to know about you?

A: Having a 16-year-old is pretty shocking to people, considering I could pass for a 16-year-old myself.

Q: What is your favorite quote or motto?

A: "Money is a lousy way of keeping score."

Q: What is your favorite food?

A: Snow Crabs.

Q: What is your favorite sport?

A: Track and field.

Q: Last good book you read?

A: "Act Like A Lady, Think Like A Man," by Steve Harvey.

Q: Favorite movie?

A: "Brown Sugar." It's a great love story and good reflection on how hip-hop should be.

Q: Favorite music, artist or band?

A: Mary J. Blige, because she is a great artist who has meaning to her songs.

Q: Who are your heroes?

A: My parents—they are very loving, spiritual and supportive.

Q: What does JSC mean to you?

A: A continuance of opportunities for our future generations.

Q: What is your best memory at NASA or JSC in particular?

A: Seeing *Endeavour* fly over JSC.



NASA/STAFFORD JSC2009E23883

WANTED!

Do you know a JSC colleague or team that does something extraordinary on or off the job? Whether it's a unique skill, interesting work, special professional accomplishment, remarkable second career, hobby or volunteerism, your nominee(s) may deserve the spotlight!

The Roundup shines the light on one special person or team each month, chosen from a cross section of the JSC workforce. To suggest "Spotlight" candidates, send your nomination to the JSC Roundup Office mailbox at jsc-roundup@mail.nasa.gov. Please include contact information and a brief description of why your nominee(s) should be considered.

Center Scoop

NASA DAY AT RICE UNIVERSITY

On Oct. 10, Johnson Space Center descended on Rice Stadium for the Rice University versus the U.S. Navy football game. Attendees visited the interactive NASA exhibit and participated in pre-game activities, including listening to live music, face painting, bounce houses, a rock wall and more. JSC's mascot, "Cosmo," joined in the fun with Rice's mascot, "Sammy the Owl."



Former Rice University graduate, astronaut Danny Olivas, shares a photo opportunity with "Sammy the Owl."

TAG ... RACHEL'S IT!

The Space Life Sciences (SLS) Tagline Contest winner is Rachel Brady of the Human Adaptation and Countermeasures Office. Brady's victorious tagline, "Exploring Space, Enhancing Life," will be a commonly seen element on all SLS Web sites and content.

On Sept. 22, Brady had lunch with SLS Director Dr. Jeffrey R. Davis and JSC Director Mike Coats.



Rachel Brady, SLS tagline contest winner, enjoys lunch with JSC Director Mike Coats (center) and SLS Director Dr. Jeffrey R. Davis.

SPACE RANGERS UNITE FOR EDUCATION

Buzz Lightyear didn't quite make it to infinity, but he went well beyond the realm of other action figures.

The icon of Disney's "Toy Story" films spent 15 months on the International Space Station and got a ticker-tape parade alongside real-life moonwalker Buzz Aldrin and Expedition 18 Commander Mike Finke to welcome him home to Disney World in Orlando, Fla., on Oct. 2.

"Buzz was the perfect crewmate," Finke said. "He lifted our spirits, he didn't talk much and he didn't eat much, so he left us his extra portions."

While Buzz Lightyear is a space ranger, Finke said the character's best work has been in serving as a bridge between the fun, fanciful side of spaceflight and the technical and scientific skills NASA uses to make spaceflight happen in real life.

"Buzz is internationally known, and Buzz is a space ranger, so by sharing some of Buzz's adventures with what we do at NASA, it really highlights a lot of good things for NASA and shows what we really do, what astronauts do," Finke said.

"The toy's popularity gives NASA a head start in getting children's attention in a world in which focus is short-lived," said Joyce Winterton, NASA's associate administrator for Education.

"It's something that students and children can relate to," Winterton said. "So when they see him going up in space on the shuttle or the station, it becomes a touch point for them. Sometimes I think they see an astronaut as something they can't achieve, but when they see a toy, they somehow think, 'Hey, I can do that, too.'"

The parade coincided with a NASA education initiative that includes an opportunity for students to propose an experiment that will be flown on station. There also is a contest to design a mission patch that will go into orbit on the laboratory.

Finke also shared a stage with Buzz at Disney's Magic Kingdom to talk to school children about space travel, science and technology.



Astronaut Mike Finke rides in the welcome home parade for Buzz Lightyear at Disney's Magic Kingdom.

Roundup

The Roundup is an official publication of the National Aeronautics and Space Administration, Johnson Space Center, Houston, Texas, and is published by the Public Affairs Office for all Space Center employees.

The Roundup office is located at the Johnson Space Center, Building 2. The mail code is AD94. Visit our Web site at: <http://www.jsc.nasa.gov/roundup/online/> For distribution questions or to suggest a story idea, send an e-mail to jsc-roundup@mail.nasa.gov.

Catherine Ragin Williams Editor
Neesha Hosein Assistant Editor
Logan Goodson Graphic Designer
Laura A. Rochon NASA Publication Manager
Cassandra V. Miranda Contractor Publication Manager

PRSR STD
U.S. POSTAGE
PAID
WEBSTER, TX
Permit No. 39

OR CURRENT RESIDENT

Coats in the Trenches



NASA/BLAIR JSC2009E208827

(From left) Deputy Director Ellen Ochoa, JSC Director Mike Coats, Associate Director (Management) Melanie Saunders and Chief of Staff Bobby Watkins watch as Nicole Jordan provides an overview of the D-1 spacesuit assembly, which was developed to provide a functional, all-soft suit technology demonstrator.

On Sept. 16, Johnson Space Center Director Mike Coats and members of senior staff toured the USA Flight Crew Equipment and Extravehicular (EVA) Hardware Processing Facility and the Building 34 Advanced Space Suit Development Lab.

The USA Flight Crew Equipment and EVA Hardware Processing Facility performs

Coats looks on as Glenn Lutz provides a description of the EVA battery.



NASA/BLAIR JSC2009E208814

spacesuit flight hardware processing and maintenance. This facility is equipped with the necessary precision test equipment required to conduct flight preparation of the Extravehicular Mobility Unit and EVA tools in a controlled work environment. To accomplish this, the facility is outfitted with labs capable of processing hardware, soft goods, high-pressure oxygen, batteries and electronics. It is also equipped to support astronaut fit checks and other pressurized suited activities.

The Building 34 Advanced Space Suit Development Lab gives JSC in-house capability for the development, fabrication and testing of proof-of-concept and new technology for spacesuit systems. The lab accommodates spacesuit testing, maintenance, system checkout, pressurized and suited demonstrations, suited test subject fit checks and EVA glove box evaluations. The lab also does hardware fabrication and stowage.

Antja Chambers provides an overview of the Constellation EVA umbilical to Coats.



NASA/BLAIR JSC2009E208811

JSC Director Mike Coats and fellow senior staff members look on as Gregg Lestourgeon and Glenn Lutz present an overview of the EVA Portable Life Support System.



NASA/BLAIR JSC2009E208827